



## Introduction: Assessing the effects of climate change on Chicago and the Great Lakes

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### Abstract:

This paper introduces the analyses of the potential impacts of climate change on the city of Chicago and the Great Lakes region and potential response options that provide the basis for this special issue. Covering projected changes in climate and hydrology, this collection of studies first estimates the potential impacts of climate change on human health, natural ecosystems, water resources, energy, and infrastructure in the city of Chicago and the surrounding Great Lakes region. A consistent set of future climate projections have been used as the basis for each analysis, which together provide a vivid impression of the consequences likely to result under the SRES higher (A1FI) as compared to the lower (B1) emission scenarios. These findings highlight the importance of the next set of analyses, which focus on quantifying Chicago's greenhouse gas emissions and prioritizing emissions reduction and adaptation options in light of the projected impacts. Together, these analyses form the basis for the City of Chicago's Climate Action Plan, the first such plan to be based on a thorough climate change impact assessment exploring the implications of a range of future climate scenarios. Although focused on Chicago and the Great Lakes region, the methods described here are generally applicable across North America and many other parts of the world, serving as a pattern for future regional assessments to directly inform adaptation and mitigation policy at the local to regional scale. (c) 2009 Elsevier B.V. All rights reserved.

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### Resource Description

#### Climate Scenario :

specification of climate scenario (set of assumptions about future states related to climate)

Special Report on Emissions Scenarios (SRES), Other Climate Scenario

**Special Report on Emissions Scenarios (SRES) Scenario:** SRES A1, SRES B1

**Other Climate Scenario:** A1FI

#### Communication:

resource focus on research or methods on how to communicate or frame issues on climate change;  
 surveys of attitudes, knowledge, beliefs about climate change

A focus of content

# Climate Change and Human Health Literature Portal

## **Communication Audience:**

audience to whom the resource is directed

Policymaker

## **Exposure :**

weather or climate related pathway by which climate change affects health

Air Pollution, Ecosystem Changes, Food/Water Quality, Food/Water Security, Precipitation, Temperature

**Temperature:** Extreme Heat

## **Geographic Feature:**

resource focuses on specific type of geography

Freshwater

## **Geographic Location:**

resource focuses on specific location

United States

## **Health Impact:**

specification of health effect or disease related to climate change exposure

General Health Impact, Injury

## **Mitigation/Adaptation:**

mitigation or adaptation strategy is a focus of resource

Adaptation, Mitigation

## **Model/Methodology:**

type of model used or methodology development is a focus of resource

Exposure Change Prediction

## **Resource Type:**

format or standard characteristic of resource

Research Article

## **Timescale:**

time period studied

Long-Term (>50 years)

## **Vulnerability/Impact Assessment:**

resource focus on process of identifying, quantifying, and prioritizing vulnerabilities in a system

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